

**ATTACHMENT 3**

**TRAFFIC**

Traffic Impact Study  
Proposed Bangor Savings Bank  
Marginal Way  
Portland, Maine  
May 2015

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## Executive Summary

The following Executive Summary is prepared for the reader's convenience, but is not intended to be a substitute for reading the full report.

Gorrill-Palmer (GP) was retained by Bangor Savings Bank to examine the traffic impacts associated with a proposed three story 7,708 square foot Bangor Savings Bank building with two drive-through lanes to be located on the northwesterly side of Marginal Way in Portland. The site is currently occupied by the Northern Pride Auto Wash, which will be closed and demolished as part of this development. The site is currently served by two driveways. The westerly driveway will be removed and the easterly driveway will remain to serve the proposed bank. A site location map is included as Figure I in Appendix A.

Based on the results of the study, our office finds the following:

1. The proposed development is forecast to generate 61 and 84 trip ends for the weekday AM and PM peak hours of the generator, respectively. However, the existing Northern Pride Auto Wash generates 106 and 118 trip ends for the weekday AM and PM peak hours, respectively, for which credit can be taken. Therefore, this project will result in a **decrease** of 45 and 34 trip ends in the weekday AM and PM peak hours for the cart wash, respectively. Since there is not a net traffic increase of 100 peak hour trip ends, a MaineDOT traffic movement permit will not be required.
2. The level of service analyses show that the proposed project will have a minimal impact on traffic flow in the vicinity of the site.
3. GP reviewed the MaineDOT crash data for the years 2012 – 2014. Based on the published history, the roadway segment where the site drive is located is not classified as a high crash location.
4. The proposed project will result in the closure of one of the two driveways currently serving the site. The available sight distances at the remaining easterly driveway exceed local and MaineDOT sight distance requirements. GP recommends that all plantings, which will be located within the right of way, not exceed three feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is entering and exiting the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.
5. The proposed Bangor Savings site has been designed to facilitate pedestrian circulation and safety.

Based on these findings, it is the opinion of GP that the existing street system can accommodate the traffic generated by the redevelopment of this site.

## I. *Proposed Site*

The site is currently occupied by the Northern Pride Auto Wash, which will be closed and demolished as part of this development. The site is currently served by two driveways. The westerly driveway will be removed and the easterly driveway will remain to serve the proposed bank. A site location map is included as Figure I in Appendix A.

Proposed for the site is a three story 7,708 square foot Bangor Savings Bank building with two drive-through lanes. The lower level of the building will be a retail branch with two drive thru lanes and the upper two floors will be offices for bank management.

## II. *Background Traffic Conditions*

GP based the study on the following information:

- A proposed site plan prepared by GP dated May 2015.
- Crash information for 2012-2014 provided by the Maine Department of Transportation (MaineDOT).
- Post development traffic volumes for the Federated property project in Bayside furnished by FST for the following intersections
  - ❖ State, Kennebec and Marginal
  - ❖ Marginal and Preble
- Memorandum from Bradley Lyon of Sebago Technics entitled "Trip Generation for 20 Marginal Way, Portland, Maine"

### **Predevelopment Traffic Volumes**

#### *Federated Properties*

The Bayside area development proposed by Federated Properties was recently approved by the City of Portland. FST furnished their projected post development traffic volumes to GP which were utilized as the predevelopment volumes for the proposed Bangor Saving Bank Project.

## III. *Trip Generation*

Proposed for the site is a three story 7,708 sf Bangor Savings Bank building. The ground floor of the building will be a 2,108 sf retail bank with two drive-through lanes. The upper two floors will be bank offices consisting of 2,800 sf each. The existing Northern Pride car wash currently on the site will be demolished.

In order to determine the need for a MaineDOT Traffic Movement Permit, GP has estimated the trip ends generated by the current use of the site as well as the proposed bank and office building using the Institute of Transportation Engineers (ITE) publication Trip Generation. A trip end is defined as an in or out, thus a round trip is equal to two trip ends. These calculations presented below show there is

a net decrease in trip ends during the AM and PM peak hours of the proposed bank building compared to the car wash. Since there is not a net traffic increase of 100 peak hour trip ends, a MaineDOT traffic movement permit will not be required.

*Trips associated with the Northern Pride car wash-* GP utilized a memorandum from Bradley Lyons of Sebago Technics to William DeSena dated August 29, 2014 to estimate the trip ends associated with the car wash. A copy of this memo is included in the Appendix to this report. The memo analyzed the trip generation associated with the car wash using sales data for weekdays in January, April and December and on a Sunday in April of 2013. The data showed a weekday average of 106 AM and 118 and PM trip ends during the peak hours for the car wash for the data compiled.

*Trip Estimate for the Proposed Bank-* For the purposes of this analysis, GP has estimated the trips generated by the proposed bank using Land Use Code 912, Drive-In Bank of the 9<sup>th</sup> Edition of the Institute of Transportation Engineers publication, Trip Generation. A summary of the resulting trip generation estimate is presented below. The trip generation calculations are included in Appendix C.

**Trip Generation – Net Increase for Proposed Bangor Savings Bank (\*Trip Ends) During the Peak hour of the Generator**

Time Period	Car Wash	Bangor Savings Bank	Net Increase
Daily	1076	432	-644
Weekday AM Peak Hr of Generator	106	61	-45
Weekday PM Peak Hr of Generator	118	84	-34
Saturday Peak Hr of Generator	116	57	-59

\*A trip end is either a trip into or out of the site. Thus a round trip equals two trip ends.

These results show that the peak hours of the proposed project will generate less than currently occurs during the peak hours of the existing car wash.

The peak hour of the adjacent street traffic on Marginal Way generally occurs from 7:30 to 8:30 AM and again from 4:30 to 5:30 PM. A comparison of the existing and proposed uses during the peak hour of the adjacent street traffic is summarized below:

**Trip Generation – Net Increase for Proposed Bangor Savings Bank (\*Trip Ends) During the Peak Hour of Adjacent Street Traffic**

Time Period	Car Wash	Bangor Savings Bank	Net Increase
Daily	1076	432	-644
Weekday AM Peak Hr of Adj Street	85	43	-42
Weekday PM Peak Hr of Adj Street	98	84	-14
Saturday Peak Hr of Adj Street	116	57	-59

These results show that during the peak hour of the adjacent street traffic the proposed project will generate less than currently occurs during the peak hour of the adjacent street traffic for the existing car wash.

IV. *Trip Distribution*

GP has estimated the trip distribution based on the information published by ITE which is summarized below.

Land Use	AM Peak	PM Peak
<b>Retail Bank</b>		
Entering	60%	50%
Exiting	40%	50%
<b>Office</b>		
Entering	90%	15%
Exiting	10%	85%

V. *Trip Composition*

GP has utilized the following trip composition based on information obtained from the ITE publication, *Trip Generation Handbook* for Land Use Codes 715 and 912, Single Tenant Office Building and Drive-In Bank respectively. The percentages were compiled for the AM and PM peak hours as follows:

**Trip Composition for Proposed Bangor Savings Bank**

Trip Type	AM Peak Hour				PM Peak Hour			
	Office		Bank		Office		Bank	
	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit
Primary	18	2	3	2	2	23	7	8
Pass-by	0	0	7	5	0	0	15	15
Diverted	0	0	3	2	0	0	7	7
<b>Total</b>	<b>18</b>	<b>2</b>	<b>13</b>	<b>9</b>	<b>2</b>	<b>23</b>	<b>29</b>	<b>30</b>

VI. *Trip Assignment*

The trip assignment for the proposed site is based on existing traffic patterns. Trip assignment is shown on Figure 3 in Appendix A. Since the Northern Pride car wash was operational when the traffic counts were completed for Federated Properties we have assumed the development traffic was already in the traffic stream at the adjacent intersections.

VII. **2016 Post Development Traffic**

The anticipated year 2016 predevelopment traffic shown on Figure 2 of Appendix A has been combined with the trips forecast for the development shown on Figure 3 of Appendix A to yield the 2016 postdevelopment traffic shown on Figure 4 of Appendix A.

VIII. *Study Area*

Since the proposed project is forecast to generate less trips than the car wash during both the adjacent street as well as the overall peak hours, the study area for the project is limited to the site driveway onto Marginal Way.

IX. *Capacity Analyses*

The capacity analyses were performed using the Synchro / Simtraffic computer software, with an average of five runs. Levels of service rankings are similar to the academic ranking system where an 'A' represents little control delay and an 'F' represents significant delay. A level of service 'D' or above is desired at a signalized intersection. At an unsignalized intersection, if the level of service falls below a 'D', an evaluation should be made to determine if further mitigation is warranted.

The following table summarizes the relationship between control delay and level of service for an unsignalized intersection:

Level of Service Criteria for Unsignalized Intersections

Level of Service	Control Delay per Vehicle (sec)
A	Up to 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Greater than 50.0

Site Driveway / Marginal Way

The results of the capacity analyses for the site driveway for the AM and PM peak hours of adjacent street traffic are summarized as follows. The detailed analyses are included in Appendix B.

Level of Service Summary

Approach	Peak Hour	
	AM Post	PM Post
Site Drive / Marginal Way		
Site Drive - SB	A	B
Marginal - NE	A	A
Marginal - SW	A	A

As can be seen from the results, the each of the approaches of the site driveway intersection are forecast to operate at acceptable levels of service.

X. *Crash Data*

In order to evaluate whether a location has a crash problem, MaineDOT uses two criteria to define High Crash Locations (HCL). Both criteria must be met in order to be classified as an HCL.

1. A critical rate factor of 1.00 or more for a three-year period. (A Critical Rate Factor {CRF} compares the actual accident rate to the rate for similar intersections in the State. A CRF of less than 1.00 indicates a rate less than average) and:
2. A minimum of eight crashes over the same three-year period.

The following summarizes the crash history for the roadway segment where the site driveway is located.

**MaineDOT Crash Data for 2012-2014: Road Segments**

Nodes	Street	From	To	# of Collisions	CRF	HCL?
60346-18999	Marginal Way	Forest Ave	Hanover St	2	0.31	No

Based on the published history provided by MaineDOT, the roadway segment where the site driveway is located is not classified as a high crash location.

XI. *Sight Line Analysis*

The Maine Department of Transportation (MaineDOT) and the City of Portland have guidelines for sight distances at roadways. The sight line standards for MaineDOT and the City of Portland are as follows:

**Sight Distance Requirements**

Speed (mph)	MaineDOT (ft)	City of Portland (ft)
25	200	367
30	250	440
35	305	513
40	360	587
45	425	660
50	495	773

GP has evaluated the available sight lines at the proposed site driveway on Marginal Way in accordance with MaineDOT and City of Portland standards.

The MaineDOT standards are as follows:

- |                                |                                    |
|--------------------------------|------------------------------------|
| Roadway observation point:     | 10 feet off major street travelway |
| Height of eye at roadway:      | 3 ½ feet above ground              |
| Height of approaching vehicle: | 4 ¼ feet above road surface        |



The posted speed limit on Marginal Way in the site vicinity is 35 mph. Based on a site review, the sight distance looking to the right is to Forest Avenue, and the sight distance exceeds 550 feet looking to the left. Therefore, the available sight distances are acceptable.

GP recommends that all plantings, which will be located within the right of way, not exceed three feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is entering and exiting into the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

## XII. *Pedestrian Circulation*

The proposed Bangor Savings site has been designed to facilitate pedestrian circulation and safety. The building has been brought to the front of the lot to facilitate pedestrian access to the front of the building. The building will also be fronted by a sidewalk to facilitate convenient pedestrian access to the building. Furthermore, the existing car wash has two curb cuts on Marginal Way. The proposed Bangor Saving Bank project will eliminate one of the existing curb cuts to improve pedestrian safety.

# APPENDIX A



U.S.G.S. Location Map  
 Bangor Savings Bank - Portland, Maine  
 U.S.G.S. Portland-East, Maine-7.5 Minute Series (Topographic)

Design: JWA	Date: may 2015
Draft: CG	Job No.: 2970
Checked: AMP	Scale: None
File Name: 2970-LOCATION.dwg	

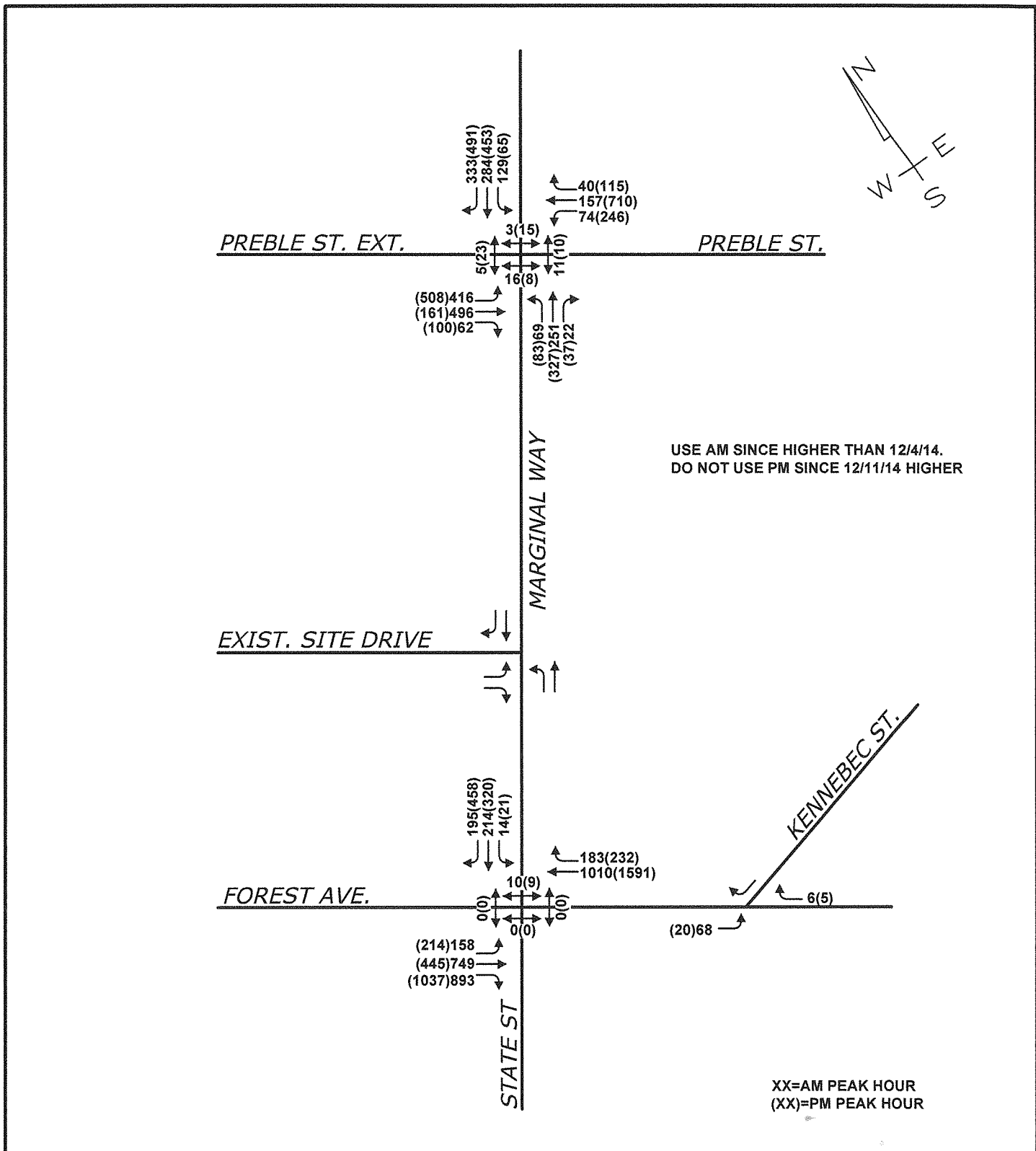


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 207.657.6910

Figure

1

# 2016 Predevelopment Volumes



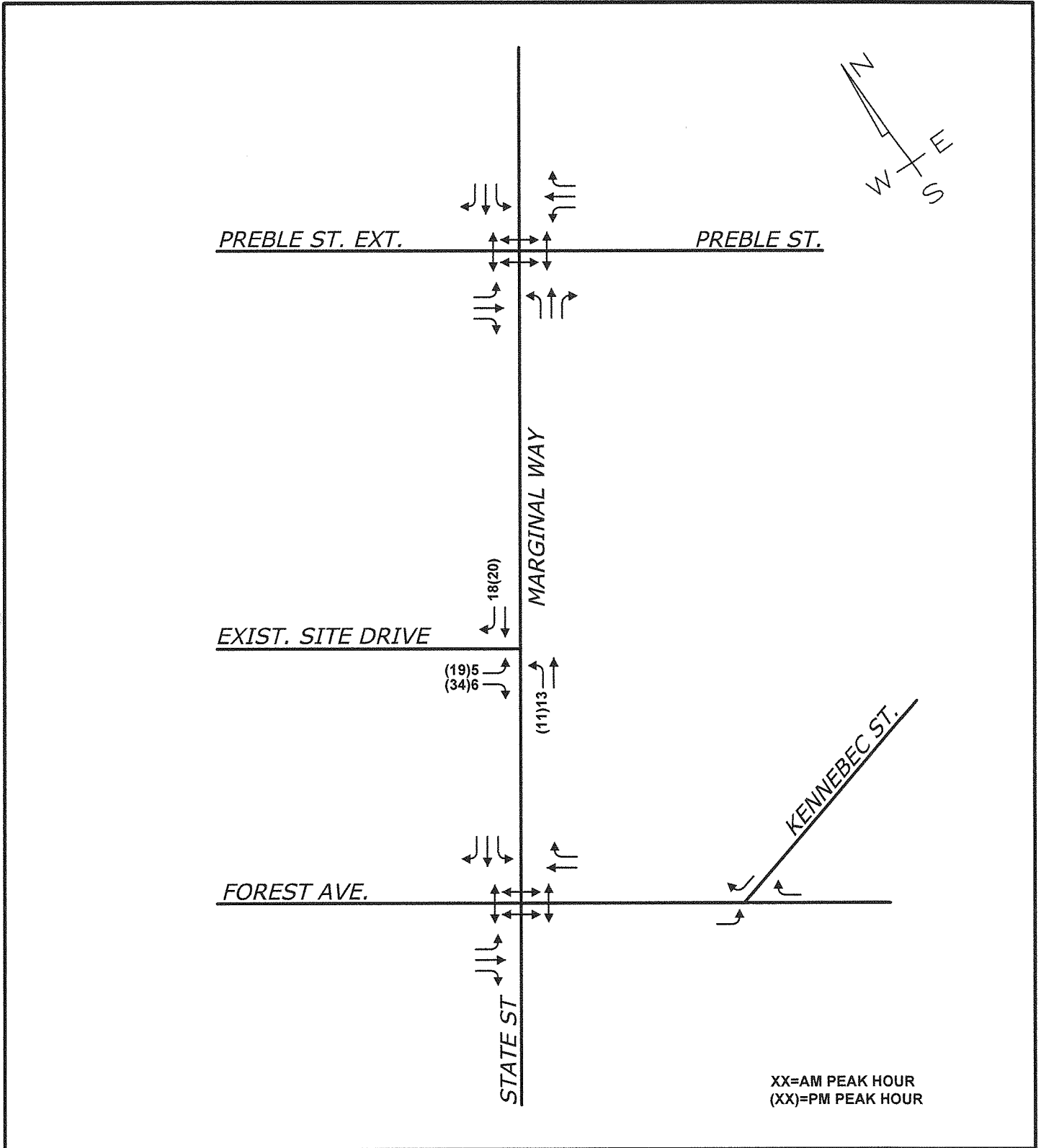
## PROPOSED BANGOR SAVINGS, PORTLAND, MAINE

Design: TLG    Scale: NONE  
 Draft: DB    Date: APR 2015  
 Checked: -    File Name: 2970-TRAFF.dwg



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# Development Volumes



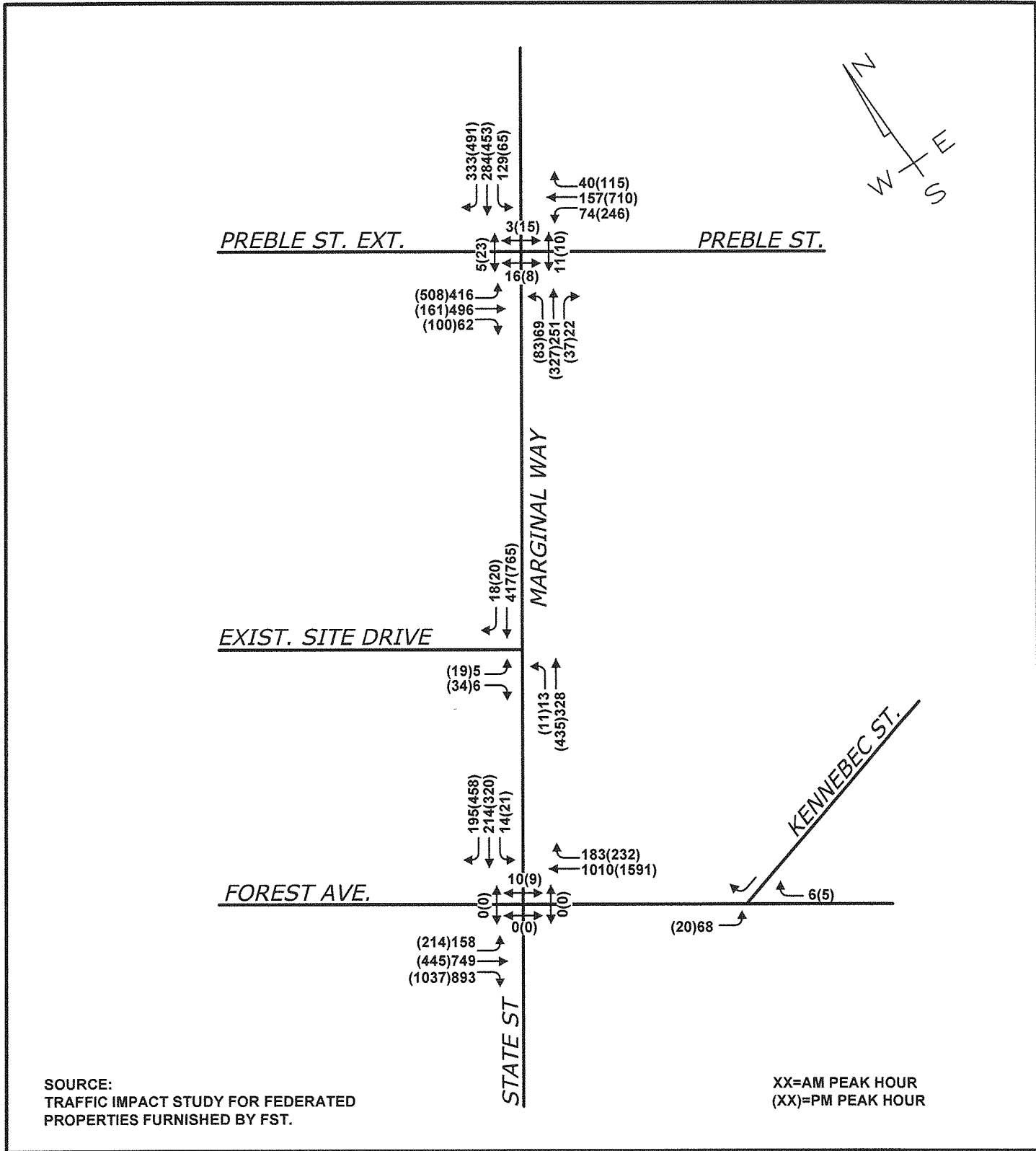
## PROPOSED BANGOR SAVINGS, PORTLAND, MAINE

Design: TLG      Scale: NONE  
 Draft: DB        Date: APR 2015  
 Checked: -        File Name: 2970-TRAFF.dwg



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# 2016 Postdevelopment Volumes



## PROPOSED BANGOR SAVINGS, PORTLAND, MAINE

Design: TLG Scale: NONE  
 Draft: DB Date: APR 2015  
 Checked: - File Name: 2970-TRAFF.dwg



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## APPENDIX B

### Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	811	853	785	777	739	792
Vehs Exited	809	856	785	777	738	793
Starting Vehs	6	7	7	2	5	5
Ending Vehs	8	4	7	2	6	5
Travel Distance (mi)	124	132	120	120	114	122
Travel Time (hr)	4.5	4.8	4.4	4.3	4.1	4.4
Total Delay (hr)	0.3	0.3	0.3	0.2	0.2	0.2
Total Stops	29	18	16	13	9	17
Fuel Used (gal)	3.9	4.1	3.8	3.7	3.4	3.8

### Interval #0 Information Seeding

Start Time 6:57  
 End Time 7:00  
 Total Time (min) 3

Volumes adjusted by Growth Factors.

No data recorded this interval.

### Interval #1 Information Recording

Start Time 7:00  
 End Time 8:00  
 Total Time (min) 60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	811	853	785	777	739	792
Vehs Exited	809	856	785	777	738	793
Starting Vehs	6	7	7	2	5	5
Ending Vehs	8	4	7	2	6	5
Travel Distance (mi)	124	132	120	120	114	122
Travel Time (hr)	4.5	4.8	4.4	4.3	4.1	4.4
Total Delay (hr)	0.3	0.3	0.3	0.2	0.2	0.2
Total Stops	29	18	16	13	9	17
Fuel Used (gal)	3.9	4.1	3.8	3.7	3.4	3.8



## Baseline

## 3: Site Drive &amp; Marginal Way Performance by approach

Approach	SB	NE	SW	All
Denied Del/Veh (s)	0.1	0.4	0.3	0.4
Total Del/Veh (s)	5.0	0.4	0.5	0.5

## Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	0.7

Baseline

Intersection: 3: Site Drive & Marginal Way

Movement	SB	NE
Directions Served	LR	L
Maximum Queue (ft)	24	31
Average Queue (ft)	7	5
95th Queue (ft)	25	25
Link Distance (ft)	243	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1316	1377	1264	1211	1229	1279
Vehs Exited	1321	1381	1263	1212	1230	1281
Starting Vehs	10	10	8	5	5	7
Ending Vehs	5	6	9	4	4	5
Travel Distance (mi)	202	212	194	186	189	196
Travel Time (hr)	7.7	8.2	7.4	7.0	7.1	7.5
Total Delay (hr)	0.7	0.9	0.7	0.6	0.7	0.7
Total Stops	55	62	58	55	52	57
Fuel Used (gal)	6.6	6.9	6.4	6.0	6.1	6.4

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60
Volumes adjusted by Growth Factors.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	1316	1377	1264	1211	1229	1279
Vehs Exited	1321	1381	1263	1212	1230	1281
Starting Vehs	10	10	8	5	5	7
Ending Vehs	5	6	9	4	4	5
Travel Distance (mi)	202	212	194	186	189	196
Travel Time (hr)	7.7	8.2	7.4	7.0	7.1	7.5
Total Delay (hr)	0.7	0.9	0.7	0.6	0.7	0.7
Total Stops	55	62	58	55	52	57
Fuel Used (gal)	6.6	6.9	6.4	6.0	6.1	6.4

## Baseline

## 3: Site Drive &amp; Marginal Way Performance by approach

Approach	SB	NE	SW	All
Denied Del/Veh (s)	0.1	0.4	0.7	0.6
Total Del/Veh (s)	12.2	0.4	0.8	1.1

## Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	1.5

## Baseline

## Intersection: 3: Site Drive &amp; Marginal Way

Movement	SB	NE
Directions Served	LR	L
Maximum Queue (ft)	66	36
Average Queue (ft)	23	6
95th Queue (ft)	50	26
Link Distance (ft)	243	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)		0
Queuing Penalty (veh)		0

## Network Summary

Network wide Queuing Penalty: 0

## APPENDIX C

JN:  
 Project Description:  
 Project Location:  
 Date:

2970  
 Bangor Savings Bank  
 Marginal Way, Portland  
 5/4/2015

Gorrill-Palmer Consulting Engineers, Inc.  
 P.O. Box 1237  
 15 Shaker Road  
 Gray, Maine 04039

**Single Tenant Office Building  
 Land Use Code (LUC) 715**

Gross Floor Area (ft<sup>2</sup>): 5,600

**Average Rate**

Time Period	ITE Trip Rate	Trip Ends
Weekday	T = 11.65 (X)	65
AM Peak Hour	T = 1.80 (X)	10
PM Peak Hour	T = 1.74 (X)	10

Directional Split *		Directional Distribution	
IN	OUT	IN	OUT
50%	50%	33	32
90%	10%	9	1
15%	85%	2	8

\* Percentages rounded to nearest 5%

**Fitted Curve**

Time Period	ITE Trip Rate	Trip Ends
Weekday	$\ln(T) = 0.60 \ln(X) + 4.30$	207
AM Peak Hour	T = 1.67(X) + 21.93	31
PM Peak Hour	T = 1.52 (X) + 34.60	43

Directional Split *		Directional Distribution	
IN	OUT	IN	OUT
50%	50%	104	103
90%	10%	28	3
15%	85%	6	37

\* Percentages rounded to nearest 5%

**AVERAGE**

Time Period	Trip Ends	Directional Split *		Directional Distribution	
		IN	OUT	IN	OUT
Weekday	136	50%	50%	68	68
AM Peak Adjacent Street	21	90%	10%	18	2
PM Peak Adjacent Street	27	15%	85%	4	23

JN: 2970  
 Project Description: Bangor Savings  
 Project Location: Marginal Way Portland  
 Date: 5/4/2015

Gorrill-Palmer Consulting Engineers, Inc.  
 P.O. Box 1237  
 15 Shaker Road  
 Gray, Maine 04039

**Drive-in Bank-9th Edition  
 Land Use Code (LUC) 912**

Gross Floor Area (ft<sup>2</sup>): 2,108

Time Period	ITE Trip Rate	Trip Ends	Directional Split *		Directional Distribution		R^2
			IN	OUT	IN	OUT	
Weekday	T = 148.15 (X)	312	50%	50%	156	156	0.59
AM Peak Adjacent Street	T = 12.08 (X)	25	55%	45%	14	11	---
PM Peak Adjacent Street	T = 24.30 (X)	51	50%	50%	26	25	---
AM Peak Hour of Generator	T = 17.57 (X)	37	50%	50%	19	18	0.51
PM Peak Hour of Generator	T = 26.69 (X)	56	50%	50%	28	28	---
Saturday	T = 86.32 (X)	182	50%	50%	91	91	0.52
Saturday Peak Hour of Gen.	T = 26.31 (X)	55	50%	50%	28	27	---

\* Percentages rounded to nearest 5%

Number of Drive-in Lanes: 2

Time Period	ITE Trip Rate	Trip Ends	Directional Split *		Directional Distribution		R^2
			IN	OUT	IN	OUT	
Weekday	T = 139.25 (X)	279	50%	50%	140	139	0.52
AM Peak Adjacent Street	T = 9.29(X)	19	60%	40%	11	8	---
PM Peak Adjacent Street	T = 33.24 (X)	66	50%	50%	33	33	---
AM Peak Hour of Generator	T = 21.64 (X)	43	50%	50%	22	21	---
PM Peak Hour of Generator	T = 29.05 (X)	58	50%	50%	29	29	0.55
Saturday	Not Given	0	50%	50%	0	0	---
Saturday Peak Hour of Gen.	T = 28.78 (X)	58	50%	50%	29	29	---

\* Percentages rounded to nearest 5%

**AVERAGE**

Time Period	Trip Ends	Directional Split *		Directional Distribution	
		IN	OUT	IN	OUT
Weekday	296	50%	50%	148	148
AM Peak Adjacent Street	22	58%	42%	13	9
PM Peak Adjacent Street	59	50%	50%	29	30
AM Peak Hour of Generator	40	50%	50%	20	20
PM Peak Hour of Generator	57	50%	50%	29	28
Saturday Peak Hour of Gen.	57	50%	50%	28	29



### Site Generated Trip Ends

AM Peak Hour  
 TOTAL ENTERING TRIPS = 79  
 TOTAL EXITING TRIPS = 124

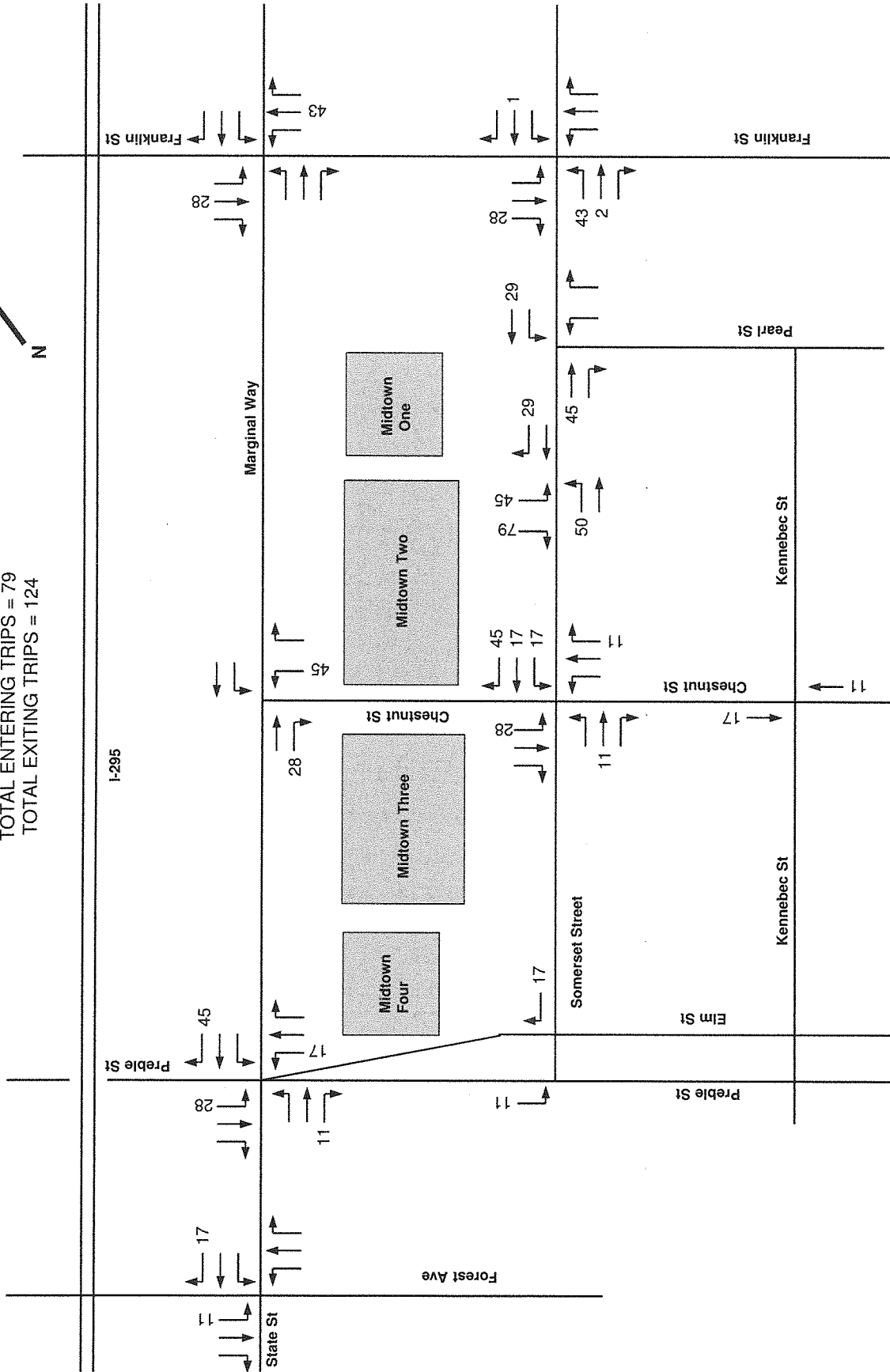
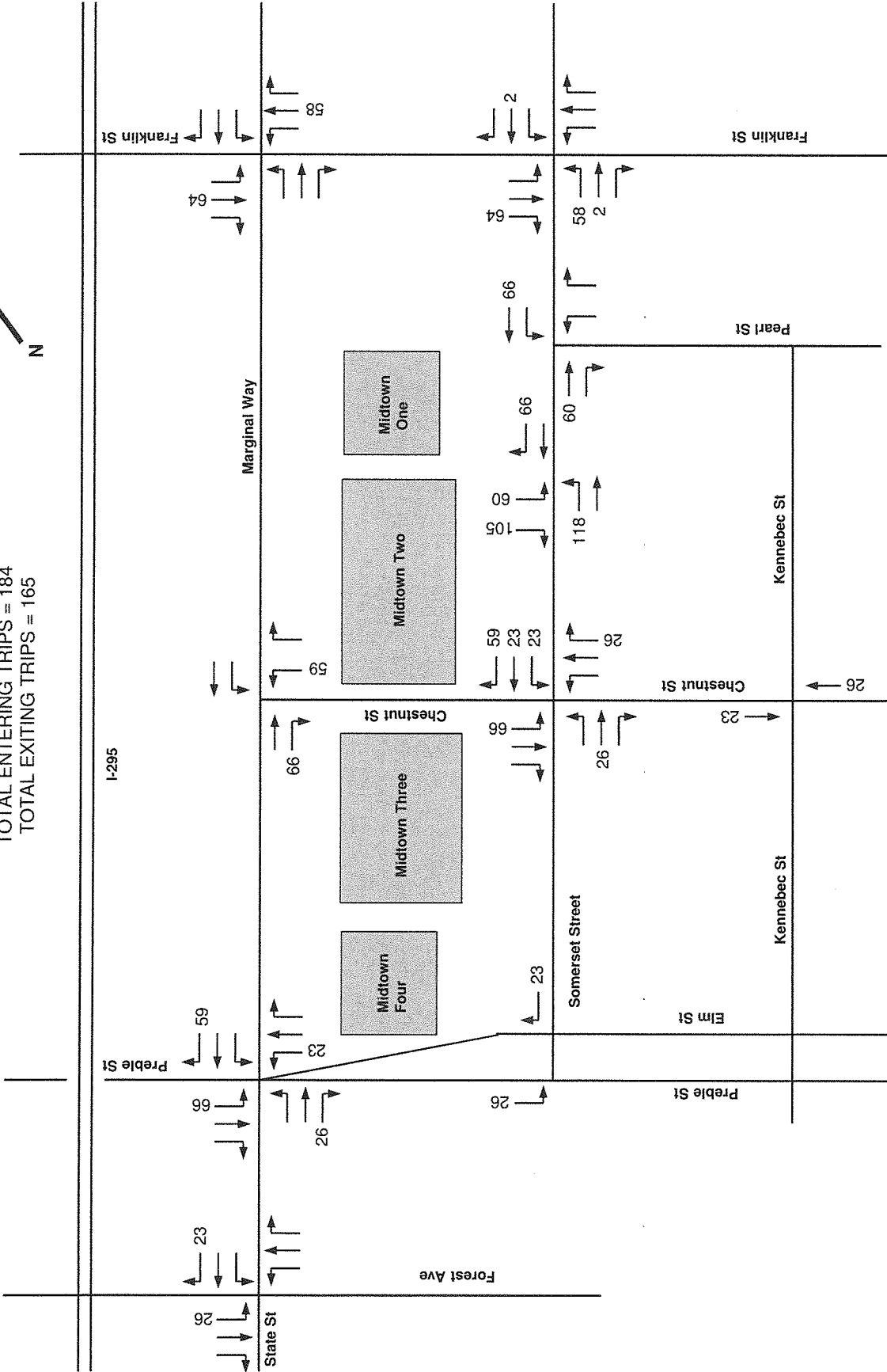


Figure 2  
 Not to Scale



# Site Generated Trip Ends

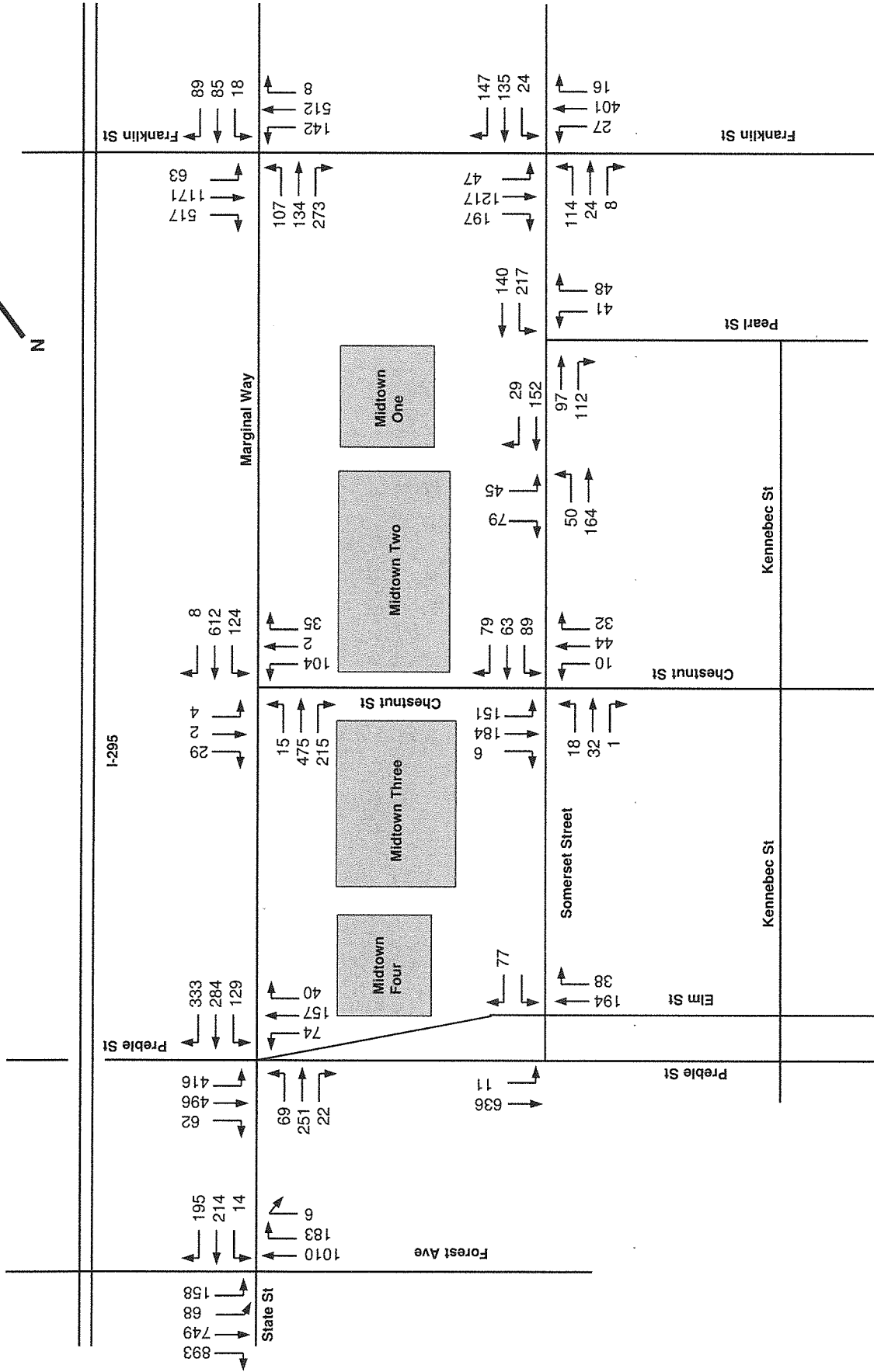
PM Peak Hour  
 TOTAL ENTERING TRIPS = 184  
 TOTAL EXITING TRIPS = 165



**Figure 3**  
 Not to Scale

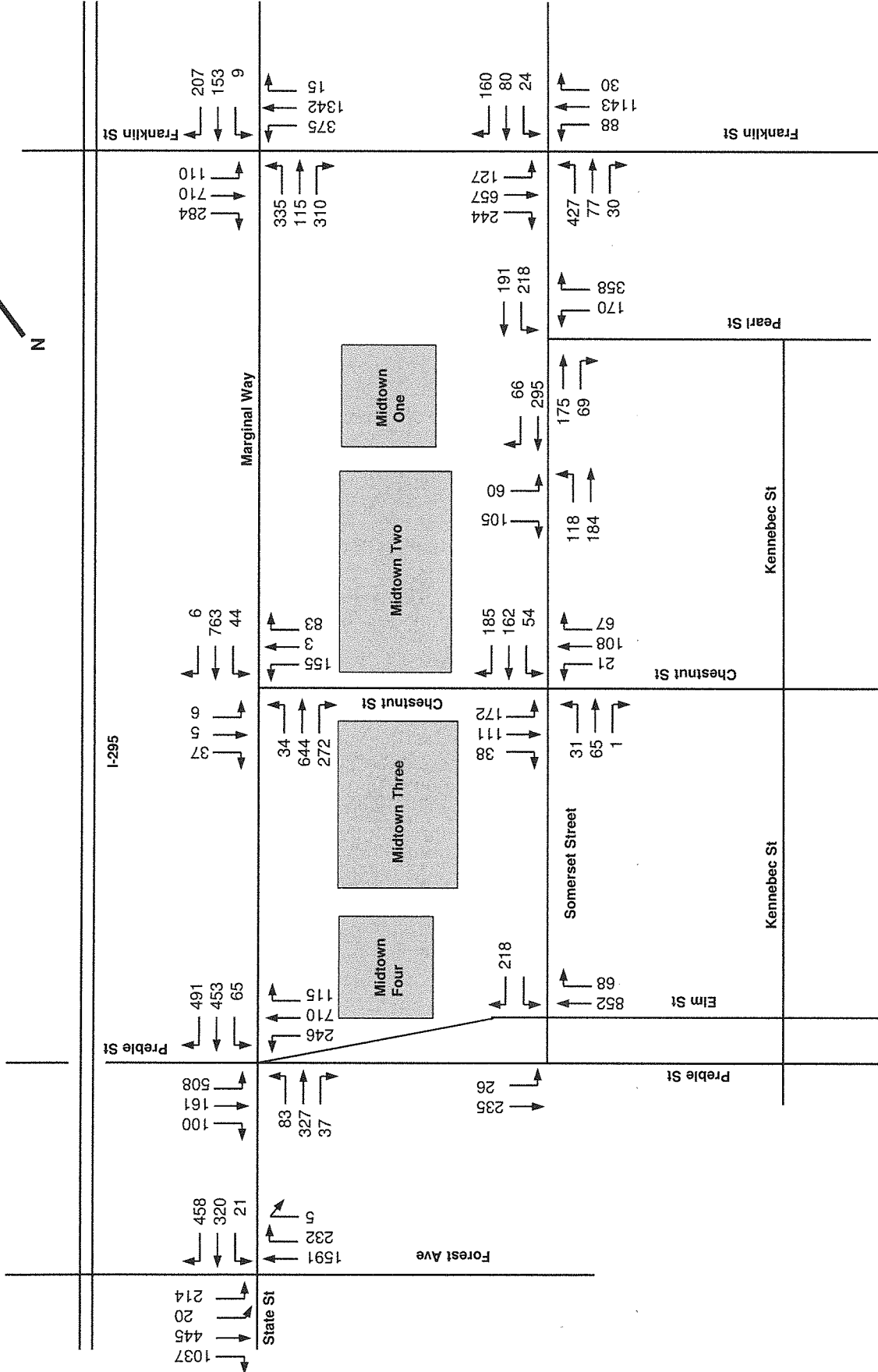


# Post-Development Turning Movement Counts AM Peak Hour



**Figure 4**  
Not to Scale

# Post-Development Turning Movement Counts PM Peak Hour



**Figure 5**  
Not to Scale

## Memorandum

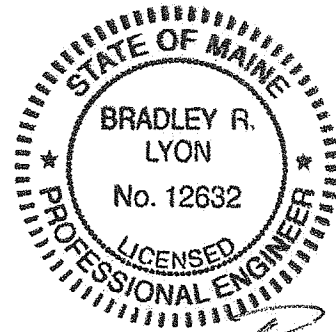
To: William DeSena

From: Bradley R. Lyon, P.E., PTOE,  
Senior Transportation Engineer

Job #: 14313

Date: August 29, 2014

Subject: Trip Generation Calculations for  
20 Marginal Way, Portland, Maine



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8/29/14

The purpose of this memorandum is to calculate what the peak hour trip generation is on 20 Marginal Way in Portland, Maine for the existing 2,500 sf "Northern Pride" automated car wash and compare it to the following three proposed land uses:

- 2,500 sf Dunkin Donuts w/Drive Thru
- 2,500 sf Generic Coffee Shop w/Drive Thru
- 2,500 sf Drive-In Bank w/1 Drive Thru Lane

### Existing 2,500 sf "Northern Pride" Automated Car Wash

The latest edition, 8<sup>th</sup>, of the Institute of Transportation Engineers (ITE) Trip Generation Manual was referenced using Land Use Code 948, Automated Car Wash in an attempt to estimate peak hour traffic. Analysis of the land use found that only 2 observations were available, therefore existing sales data was requested. Existing hourly sales data was provided to us for weekdays in January, April and December of 2013 and a Sunday in April of 2013. The results, as well as the calculated weekday average are as follows:

**Table 1**  
**“Northern Pride Auto Wash” Sales Data**

Time Period	Wed., Dec. 11, 2013	Tues., Jan. 8, 2013	Thurs., Jan. 10, 2013	Tues., April 20, 2013	Sat., Feb. 23, 2013	Sun., April 7, 2013	Weekday Average
07:30 AM – 08:00 AM	18	22	20	20	24	19	20
08:00 AM – 09:00 AM	49	36	36	57	43	43	45
09:00 AM – 10:00 AM	71	37	46	56	54	42	<b>53</b>
10:00 AM – 11:00 AM	52	46	51	55	43	46	51
11:00 AM – 12:00 PM	48	51	57	51	42	52	52
12:00 PM – 1:00 PM	69	57	59	51	<b>58</b>	56	<b>59</b>
1:00 PM – 2:00 PM	60	51	54	46	43	56	53
2:00 PM – 3:00 PM	45	55	58	43	52	43	50
3:00 PM – 4:00 PM	61	58	64	44	47	53	57
4:00 PM – 5:00 PM	49	52	54	52	54	<b>60</b>	52
5:00 PM – 6:00 PM	34	60	45	44	47	45	46

Given this data, it was determined that the existing weekday AM Peak Hour was from 9:00 AM to 10:00 AM, generating **106 trips** (53 sales \* 2 (entering and exiting vehicles)) and the existing weekday PM Peak Hour was from 12:00 PM to 1:00 PM, generating **118 trips** (weekday average of 59 sales \* 2 (entering and exiting vehicles)). The Saturday Peak Hour occurred from 12:00 PM to 1:00 PM on February 23, 2013 with **116 trips** (58 sales \* 2 (entering and exiting vehicles)). The Sunday Peak Hour occurred from 4:00 PM to 5:00 PM on April 7<sup>th</sup>, 2013 with **120 trips** (60 sales \* 2 (entering and exiting vehicles)). A summary of this can be found in Table 2 below:

**Table 2**  
**Proposed Trip Generation based on Sales Data**  
**“Northern Pride Auto Wash”**

	<b>Total Trips</b>
Weekday AM Peak Hour of Generator	<b>106</b>
Weekday PM Peak Hour of Generator	<b>118</b>
Saturday Peak Hour of Generator	<b>116</b>
Sunday Peak Hour of Generator	<b>120</b>

**Proposed 2,500 sf Dunkin Donuts w/Drive Thru**

Dunkin Donuts stores are unique in their trip generating characteristics and as such a special study was conducted in 2005 by Gorrill - Palmer Engineers (G-P) to better define these relationships, since MaineDOT determined that standard ITE data did not seem to provide reasonable estimates. The G-P Study outlined three means of more accurately forecasting trip generation by these facilities based on their location and the traffic volumes in the vicinity of the sites. We used these methodologies to arrive at the following results, which have been averaged to determine the AM Peak Hour of the generator. It should be noted that the Annual Average Daily Traffic in front of the site was recorded by MaineDOT in 2010 to be 8,050 vehicles per day. In addition, the AM peak hour is generally considered to be 8% of the average daily traffic, which in this case would be 644 vehicles.

Trip Gen by Store Size	=	$0.0536 * (2,500 \text{ S.F.}) + 142.75$	=	276.75 trips
Trip Gen by AADT	=	$0.0081 * (8,050 \text{ AADT}) + 139.36$	=	204.57 trips
Trip Gen by AM Peak Hr	=	$0.1061 * (644 \text{ vehicles}) + 144.49$	=	212.82 trips
Average			=	<b>231 trips</b>

The above figure will place this Project in the “over 200” Traffic Movement Permit category. However, Dunkin Donuts stores have only a 15% Primary (or new) Trip production rate, (i.e. most patrons are already on the roadway network and stop in on their way by). Very few are new trips to the roadway. In this case the 231 Dunkin Donuts trips will only represent about 35 new trips or approximately 18 new trips in and 17 new trips out of the site. Given the presence of an existing shared left turn lane on Marginal Way, offsite improvements should be minimal but the extent of improvements wouldn’t be able to be determined until a “Scoping Meeting” is held with MaineDOT. The application fees to the state for permit of this level are \$2,000 plus our engineering costs to produce the application and perform a formal traffic study of the area.

**Proposed 2,500 sf Generic Coffee Shop w/Drive Thru**

Similar to the trip generation estimate for the existing "Northern Pride" automated car wash, the proposed 2,500 sf Generic Coffee Shop w/Drive Thru was estimated using the 8<sup>th</sup> Edition of the ITE Trip Generation Manual. Land Use Code 940 Bread/Donut/Bagel Shop with Drive-Through Window was used. Data was only available for the peak hour of adjacent street traffic, one hour between 7 and 9 AM and one hour between 4 and 6 PM. The results are as follows:

**Table 3**  
**Proposed Trip Generation by Square Feet**  
**Land Use Code 940, Bread/Donut/Bagel Shop with Drive-Through Window**

By Square Feet	Square Feet	Rate (Trips / 1,000 sf)	Total Trips
Weekday Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 AM	2,500	36.92	92
Weekday Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 PM	2,500	19.56	49

Given this information a Traffic Movement Permit would not be required from the MaineDOT due to the fact that the development would generate less than 100 peak hour trips.



**Proposed 2,500 sf Drive-In Bank w/1 Drive Thru Lane**

Similar to the trip generation estimate for the existing "Northern Pride" automated car wash and the Generic Coffee Shop, the proposed 2,500 sf Drive-In Bank w/1 Drive Thru Lane was estimated using the 8<sup>th</sup> Edition of the ITE Trip Generation Manual. Land Use Code 912 Drive-in Bank was used by using rates per 1,000 square feet of gross floor area averaged with rates by drive-in lanes. The results are as follows:

**Table 4**  
**Proposed Trip Generation by Square Feet**  
**Land Use Code 912 Drive-in Bank**

<b>By Square Feet</b>	<b>Square Feet</b>	<b>Rate (Trips / 1,000 sf)</b>	<b>Total Trips</b>
Weekday AM Peak Hour of Generator	2,500	17.31	<b>43</b>
Weekday PM Peak Hour of Generator	2,500	26.69	<b>67</b>
Saturday Peak Hour of Generator	2,500	26.53	<b>66</b>
Sunday Peak Hour of Generator	2,500	4.78	<b>12</b>

**Table 5**  
**Proposed Trip Generation by Drive-In Lane**  
**Land Use Code 912 Drive-in Bank**

By Drive-In Lane	Drive-In Lanes	Rate (Trips / Drive-In Lane)	Total Trips
Weekday AM Peak Hour of Generator	1	21.64	<b>22</b>
Weekday PM Peak Hour of Generator	1	29.05	<b>29</b>
Saturday Peak Hour of Generator	1	29.88	<b>30</b>
Sunday Peak Hour of Generator	1	N/A	<b>N/A</b>

**Table 6**  
**Proposed Trip Generation Total Average**  
**Land Use Code 912 Drive-in Bank**

By Drive-In Lane	Trips by Square Foot	Trips by Drive-In Lane	Average Trips
Weekday AM Peak Hour of Generator	43	22	<b>33</b>
Weekday PM Peak Hour of Generator	67	29	<b>48</b>
Saturday Peak Hour of Generator	66	30	<b>48</b>
Sunday Peak Hour of Generator	12	N/A	<b>12</b>

Given this information a Traffic Movement Permit would not be required from the MaineDOT due to the fact that the development would generate less than 100 peak hour trips.

**Conclusion**

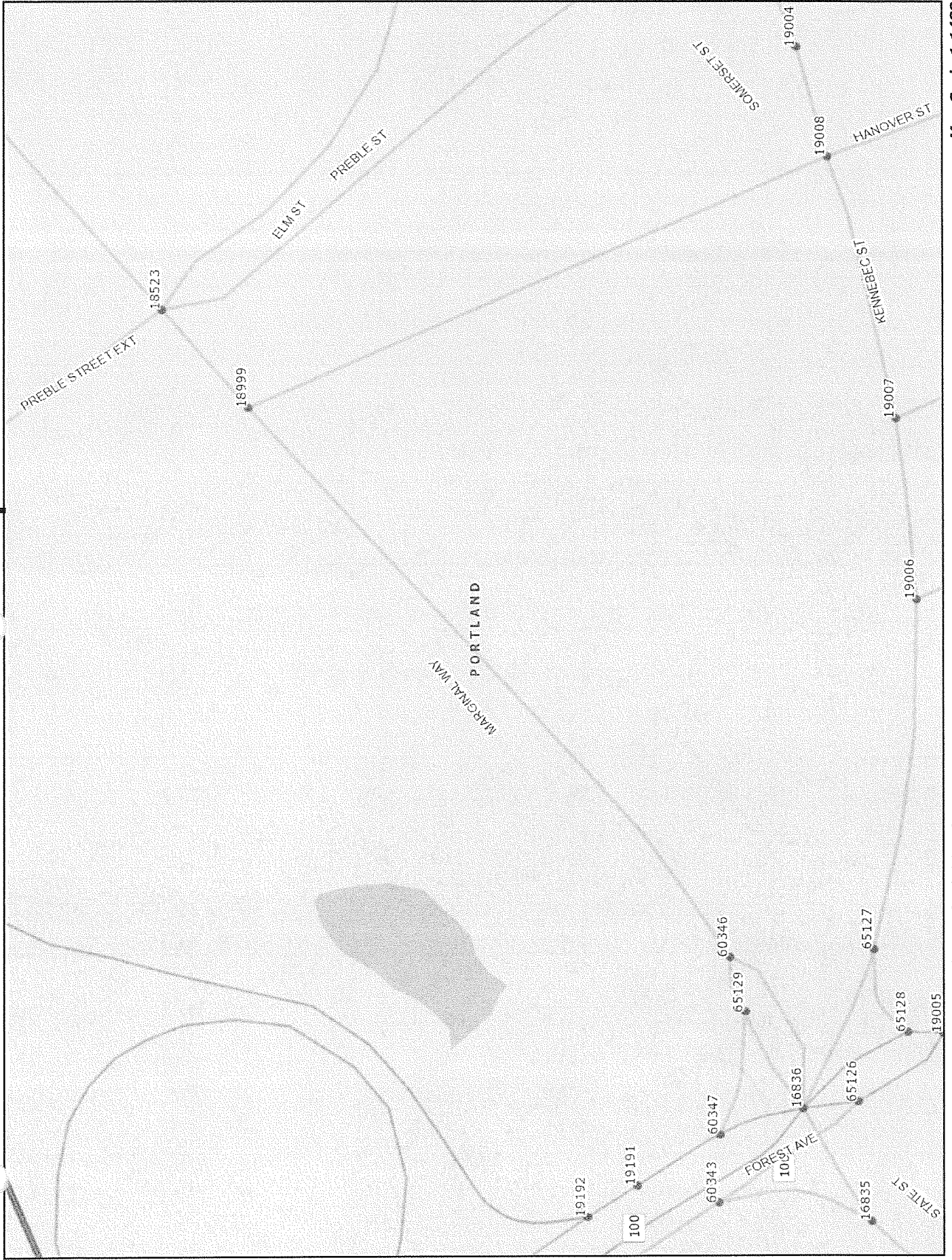
In conclusion, the trip generation for each of the uses is as follows:

**Table 7**  
**Overall Trip Generation Comparison**

	Existing 2,500 sf Automated Car Wash	2,500 sf Dunkin Donuts	2,500 sf Generic Coffee Shop	2,500 sf Drive- In Bank
AM Peak Hour of Generator	106	231	92	33
PM Peak Hour of Generator	118	N/A	49	48
Saturday Peak Hour of Generator	116	N/A	N/A	48
Sunday Peak Hour of Generator	120	N/A	N/A	12
Traffic Movement Permit Required?	N/A	Yes (200+ Trips)	No	No

Given the above information, it is our opinion that a Traffic Movement Permit would only be required for the Dunkin Donuts which would generate 231 AM Peak Hour trips, putting it into the 200+ Traffic Movement Permit category. The remaining two uses all generate below 100 peak hour trips and therefore would not require a Traffic Movement Permit.

# Maine DOT Map



# Crash Summary Report

## Report Selections and Input Parameters

REPORT SELECTIONS

Crash Summary I       Section Detail       Crash Summary II       1320 Public       1320 Private       1320 Summary

REPORT DESCRIPTION

Marginal

REPORT PARAMETERS

Year 2012, Start Month 1 through Year 2014 End Month: 12

Route: 0560477

Start Node: 16836

End Node: 18523

Start Offset: 0

End Offset: 0

Exclude First Node

Exclude Last Node

Route: 3201880

Start Node: 60346

End Node: 16836

Start Offset: 0

End Offset: 0

Exclude First Node

Exclude Last Node

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary I

Nodes															
Node	Route - MP	Node Description	U/R	Total Crashes	K	A	B	C	PD	Injury	Percent Annual M Ent-Veh	Crash Rate	Critical Rate	CRF	
P16836	0560477 - 0	Int of FOREST AV KENNEBEC ST MARGINAL WY STATE	9	54	0	0	3	11	40	25.9	12.807	1.41	0.98	1.43	
												Statewide Crash Rate:	0.66		
A60346	0560477 - 0.03	Non Int MARGINAL WY	2	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00	
18999	0560477 - 0.16	Int of HANOVER ST MARGINAL WY	2	5	0	0	0	3	2	60.0	4.102	0.41	0.37	1.09	
												Statewide Crash Rate:	0.14		
18523	0560477 - 0.18	Int of ELIM ST, MARGINAL WY, PREBLE ST, PREBLE ST EX	9	25	0	0	1	6	17	29.2	9.923	0.84	1.03	0.00	
												Statewide Crash Rate:	0.66		
A65129	3201880 - 0.01	Int of CUT MARGINAL WY	2	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00	
												Statewide Crash Rate:	0.14		
<b>Study Years:</b>	<b>3.00</b>			<b>84</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>20</b>	<b>59</b>	<b>28.6</b>	<b>26.832</b>	<b>1.04</b>	<b>0.79</b>	<b>1.32</b>
<b>NODE TOTALS:</b>															

# Crash Summary I

## Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section U/R Length	Total Crashes	K	A	B	C	PD	Injury	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
16836	60346	3115192	0 - 0.03	0560477 - 0 RD INV 05 60477	0.03	2	0	0	0	0	0	0	0.0	0.00016	0.00	770.05	0.00
Int of FOREST AV KENNEBEC ST MARGINAL WY STATE ST EXT																	
60346	18999	3115193	0 - 0.13	0560477 - 0.03 RD INV 05 60477	0.13	2	2	0	0	1	1	1	50.0	0.00468	142.59	454.26	0.00
Non Int MARGINAL WY																	
18523	18999	3106676	0 - 0.02	0560477 - 0.16 RD INV 05 60477	0.02	2	1	0	0	1	0	1	100.0	0.00071	472.50	725.73	0.00
Int of ELM ST, MARGINAL WY, PREBLE ST, PREBLE ST EXT																	
60346	65129	3123766	0 - 0.01	3201880 - 0 RD INV 3201880	0.01	2	0	0	0	0	0	0	0.0	0.00031	0.00	817.46	0.00
Non Int MARGINAL WY																	
65129	16836	3139747	0 - 0.02	3201880 - 0.01 RD INV 3201880	0.02	2	0	0	0	0	0	0	0.0	0.00028	0.00	819.99	0.00
Int of CUT MARGINAL WY																	
<b>Study Years:</b> 3.00					<b>Section Totals:</b>	0.21	3	0	0	2	1	66.7	0.00613	163.16	424.75	0.38	
<b>Grand Totals:</b>					0.21	87	0	0	4	22	60	29.9	0.00613	4731.57	588.58	8.04	

# Crash Summary

## Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes			Crash Report	Crash Date	Crash Mile Point	Injury Degree
						K	A	B				
16836	60346	3115192	0 - 0.03	0560477 - 0	0	0	0	0	0			
60346	18999	3115193	0 - 0.13	0560477 - 0.03	2	0	0	0	1	2012-26376	04/11/2012	0.06
18523	18999	3106676	0 - 0.02	0560477 - 0.16	1	0	0	0	1	2012-29895	06/07/2012	0.13
60346	65129	3123766	0 - 0.01	3201880 - 0	0	0	0	0	0	2014-32637	11/25/2014	0.17
65129	16836	3139747	0 - 0.02	3201880 - 0.01	0	0	0	0	0			
<b>Totals:</b>					3	0	0	0	2	1		



Maine Department Of Transportation - Traffic Engineering, Crash Records Section  
**Crash Summary II - Characteristics**

**Crashes by Day and Hour**

Day Of Week	Hour of Day												Un	Tot												
	AM						PM																			
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11		
SUNDAY	1	0	0	0	0	0	0	0	2	1	1	1	0	0	0	0	1	0	0	0	0	1	0	0	0	8
MONDAY	0	0	0	0	0	0	0	0	1	1	0	1	1	2	1	1	0	1	1	0	1	0	0	0	0	11
TUESDAY	0	0	0	0	0	0	0	1	2	1	1	0	1	2	1	2	4	2	1	2	0	0	0	0	0	20
WEDNESDAY	0	0	0	0	0	0	0	1	2	1	0	2	2	0	1	0	2	2	3	2	1	0	0	0	0	19
THURSDAY	0	1	0	0	0	0	0	1	0	0	1	2	2	2	2	2	2	2	2	0	0	0	0	1	0	18
FRIDAY	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	1	1	0	1	1	0	0	0	0	0	8
SATURDAY	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	3
<b>Totals</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>8</b>	<b>5</b>	<b>3</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>6</b>	<b>6</b>	<b>10</b>	<b>7</b>	<b>8</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>87</b>

**Vehicle Counts by Type**

Unit Type	Total	Unit Type	Total
1-Passenger Car	115	23-Bicyclist	2
2-(Sport) Utility Vehicle	28	24-Witness	7
3-Passenger Van	4	25-Other	3
4-Cargo Van (10K lbs or Less)	2	<b>Total</b>	<b>183</b>
5-Pickup	12		
6-Motor Home	0		
7-School Bus	0		
8-Transit Bus	2		
9-Motor Coach	1		
10-Other Bus	0		
11-Motorcycle	1		
12-Moped	0		
13-Low Speed Vehicle	0		
14-Autocycle	0		
15-Experimental	0		
16-Other Light Trucks (10,000 lbs or Less)	1		
17-Medium/Heavy Trucks (More than 10,000 lbs)	2		
18-ATV - (4 wheel)	0		
20-ATV - (2 wheel)	0		
21-Snowmobile	0		
22-Pedestrian	3		

Maine Department of Transportation - Traffic Engineering, Crash Records Section  
**Crash Summary II - Characteristics**

**Crashes by Driver Action at Time of Crash**

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	56	31	1	0	0	0	88
Ran Off Roadway	0	0	0	0	0	0	0
Failed to Yield Right-of-Way	10	6	0	0	0	0	16
Ran Red Light	1	3	0	0	0	0	4
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	1	1	0	0	0	0	2
Disregarded Other Road Markings	2	1	0	0	0	0	3
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	1	3	0	0	0	0	4
Improper Turn	2	4	0	0	0	0	6
Improper Backing	1	0	0	0	0	0	1
Improper Passing	0	0	0	0	0	0	0
Wrong Way	0	1	0	0	0	0	1
Followed Too Closely	5	22	2	0	0	0	29
Failed to Keep in Proper Lane	2	2	0	0	0	0	4
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	0	0	0	0	0	0
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	0	0	0	0	0	0	0
Over-Correcting/Over-Steering	0	0	0	0	0	0	0
Other Contributing Action	2	7	0	0	0	0	9
Unknown	1	0	0	0	0	0	1
<b>Total</b>	<b>84</b>	<b>81</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>168</b>

**Crashes by Apparent Physical Condition And Driver**

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	84	78	3	0	0	5	170
Physically Impaired or Handicapped	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	0	2	0	0	0	0	2
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	0	0	0	0	0	0	0
Other	0	1	0	0	0	0	1
<b>Total</b>	<b>84</b>	<b>81</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>173</b>

**Driver Age by Unit Type**

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	1	0	0	0	0	1
10-14	0	0	0	0	0	0
15-19	8	0	0	0	0	8
20-24	16	0	0	0	0	16
25-29	28	0	0	0	0	28
30-39	37	0	0	0	0	37
40-49	23	0	0	0	0	23
50-59	27	0	0	0	0	27
60-69	19	0	0	0	0	19
70-79	7	0	0	0	0	7
80-Over	2	0	0	0	0	2
Unknown	3	2	0	3	0	8
<b>Total</b>	<b>171</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>176</b>

Maine Department Of Transportation - Traffic Engineering, Crash Records Section  
**Crash Summary II - Characteristics**

Most Harmful Event		Injury Data	
Most Harmful Event	Total	Severity Code	Injury Crashes
1-Overturn / Rollover	0	K	0
2-Fire / Explosion	0	A	0
3-Immersion	0	B	4
4-Jackknife	0	C	22
5-Cargo / Equipment Loss Or Shift	169	PD	60
6-Fell / Jumped from Motor Vehicle	0	<b>Total</b>	<b>86</b>
7-Thrown or Falling Object	0		
8-Other Non-Collision	0		
9-Pedestrian	0		
10-Pedalcycle	1		
11-Railway Vehicle - Train, Engine	0		
12-Animal	0		
13-Motor Vehicle in Transport	156		
14-Parked Motor Vehicle	0		
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0		
16-Work Zone / Maintenance Equipment	0		
17-Other Non-Fixed Object	0		
18-Impact Attenuator / Crash Cushion	0		
19-Bridge Overhead Structure	0		
20-Bridge Pier or Support	0		
21-Bridge Rail	0		
22-Cable Barrier	0		
23-Culvert	0		
24-Curb	0		
25-Ditch	0		
26-Embankment	0		
27-Guardrail Face	0		
28-Guardrail End	0		
29-Concrete Traffic Barrier	0		
30-Other Traffic Barrier	0		
31-Tree (Standing)	0		
32-Utility Pole / Light Support	0		
33-Traffic Sign Support	0		
34-Traffic Signal Support	0		
35-Fence	0		
36-Mailbox	0		
37-Other Post Pole or Support	0		

Most Harmful Event		Injury Data	
Most Harmful Event	Total	Severity Code	Injury Crashes
38-Other Fixed Object (wall, building, tunnel, etc.)	0		
39-Unknown	12		
40-Gate or Cable	0		
41-Pressure Ridge	0		
<b>Total</b>	<b>169</b>		

Traffic Control Devices		Road Character	
Traffic Control Device	Total	Road Grade	Total
1-Traffic Signals (Stop & Go)	70	1-Level	87
2-Traffic Signals (Flashing)	1	2-On Grade	0
3-Advisory/Warning Sign	0	3-Top of Hill	0
4-Stop Signs - All Approaches	0	4-Bottom of Hill	0
5-Stop Signs - Other	1	5-Other	0
6-Yield Sign	11	<b>Total</b>	<b>87</b>
7-Curve Warning Sign	0		
8-Officer, Flagman, School Patrol	0		
9-School Bus Stop Arm	0		
10-School Zone Sign	0		
11-R.R. Crossing Device	0		
12-No Passing Zone	0		
13-None	3		
14-Other	1		
<b>Total</b>	<b>87</b>		

Light Condition		Light Condition	
Light Condition	Total	Light Condition	Total
1-Daylight	62	1-Daylight	62
2-Dawn	0	2-Dawn	0
3-Dusk	6	3-Dusk	6
4-Dark - Lighted	19	4-Dark - Lighted	19
5-Dark - Not Lighted	0	5-Dark - Not Lighted	0
6-Dark - Unknown Lighting	0	6-Dark - Unknown Lighting	0
7-Unknown	0	7-Unknown	0
<b>Total</b>	<b>87</b>	<b>Total</b>	<b>87</b>

Maine Department Of Transportation - Traffic Engineering, Crash Records Section  
**Crash Summary II - Characteristics**

**Crashes by Year and Month**

Month	2012	2013	2014	Total
JANUARY	0	1	1	2
FEBRUARY	7	5	4	16
MARCH	3	0	4	7
APRIL	3	1	4	8
MAY	3	2	4	9
JUNE	2	2	1	5
JULY	0	1	3	4
AUGUST	4	1	4	9
SEPTEMBER	1	2	4	7
OCTOBER	1	1	1	3
NOVEMBER	3	4	3	10
DECEMBER	3	1	3	7
<b>Total</b>	<b>30</b>	<b>21</b>	<b>36</b>	<b>87</b>

Report is limited to the last 10 years of data.

# Crash Summary II - Characteristics

## Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End / Sideswipe	1	0	23	19	25	1	0	0	0	0	0	0	0	69
Head-on / Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	1	2	9	0	0	0	0	0	0	0	0	12
Pedestrians	0	0	0	1	0	1	0	0	0	0	0	0	0	2
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	0	0	0	1	1	0	0	0	0	0	0	0	0	2
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	2	0	0	0	0	0	0	0	0	0	2
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>0</b>	<b>24</b>	<b>25</b>	<b>35</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>87</b>

Maine Department Of Transportation - Traffic Engineering, Crash Records Section  
**Crash Summary II - Characteristics**  
 Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
<b>Blowing Sand, Soil, Dirt</b>												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>Blowing Snow</b>												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>Clear</b>												
Dark - Lighted	12	0	0	0	0	0	0	0	0	0	2	14
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	44	0	0	0	0	0	0	0	0	0	1	45
Dusk	2	0	0	0	0	0	0	0	0	0	0	2
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>Cloudy</b>												
Dark - Lighted	1	0	0	0	0	0	0	0	0	0	1	2
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	8	0	0	0	0	0	0	0	0	0	3	11
Dusk	1	0	0	0	0	0	0	0	0	0	0	1
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

# Crash Summary II - Characteristics

## Crashes by Weather, Light Condition and Road Surface

Weather	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
<b>Fog, Smog, Smoke</b>												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>Other</b>												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>Rain</b>												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	1	1
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	3	3
Dusk	0	0	0	0	0	0	0	0	0	0	3	3
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>Severe Crosswinds</b>												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Maine Department of Transportation - Traffic Engineering, Crash Records Section  
**Crash Summary II - Characteristics**

**Crashes by Weather, Light Condition and Road Surface**

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>Snow</b>												
Dark - Lighted	0	0	0	0	0	0	0	2	0	0	0	2
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	3	0	0	0	3
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>68</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>87</b>